Solve: $\begin{cases} -2x + y = -2 \\ y = x^2 - x - 6 \end{cases}$

$y = 2x - 2$

$2x - 2 = x^2 - x - 6$

$-2x \quad +2 \qquad -2x \quad +2$

$0 = x^2 - 3x - 4$

$0 = (x + 1)(x - 4)$

$\therefore x = -1, 4$

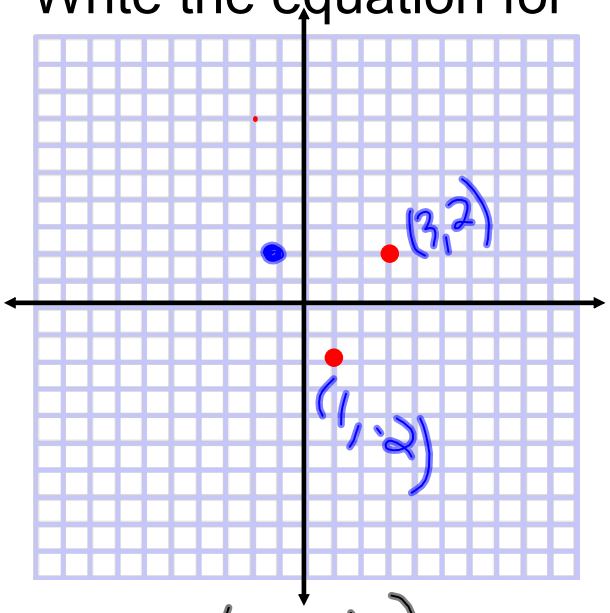
Chapter 4.10: Write Quadratic Functions and Models

- Know vertex form, standard form and intercept form of a parabola.

$y = a(x - h)^2 + k$ $\qquad$ $y = ax^2 + bx + c$

$y = a(x \pm p)(x \pm q)$

Write the equation for



$y = a(x-h)^2 + k$

$y = a(x-1)^2 - 2$

$2 = a(3-1)^2 - 2$

$2 = a4 - 2$

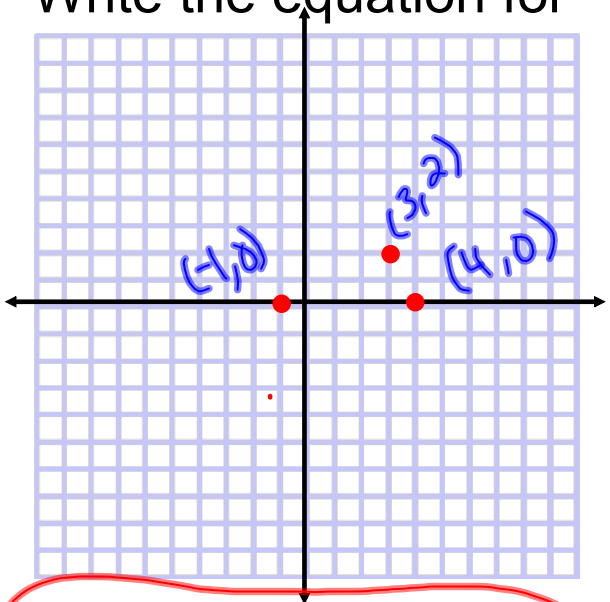
$+2 \quad +2$

$4 = 4a$

$a = 1$

$y = 1(x-1)^2 - 2$

Write the equation for



$y = a(x \pm p)(x \pm q)$

$y = a(x-4)(x+1)$

$2 = a(3-4)(3+1)$

$2 = a(-1)(4)$

$\frac{2}{-4} = \frac{-4a}{-4}$

$a = -\frac{1}{2}$

$y = -\frac{1}{2}(x-4)(x+1)$

write a quadratic function in standard form for the parabola that passes through the points (-1,-3), (0,-4) and (2,6)

$ax^2 + bx + c = y$

$a(-1)^2 + b(-1) - 4 = -3$

$a(2)^2 + b(2) - 4 = 6$

$c = -4$

$a = 2$

$b = 1$

$y = 2x^2 + 1x - 4$

Find the quadratic equation for

X	20	30	40	50	60	70
Y	372	462	509	501	437	323

Done on calc

Homework: Chapter 4.10
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